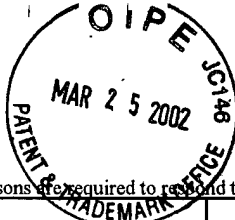


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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known	
Application Number			09/921,645	
Filing Date			August 03, 2001	
First Named Inventor			Meade et al.	
Group Art Unit			1656 / 637	
Examiner Name			Not Yet Assigned <i>Teresa Stnelechia</i>	
Attorney Docket Number			A-64411-2/RFT/RMS/RM	

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
TS	1✓	4,704,193		Bowers et al.	11/1987	
	2	4,707,352		Stavrianopoulos	11/1987	
	3	4,707,440		Stavrianopoulos	11/1987	
	4	4,711,955		Ward et al.	12/1987	
	5	4,755,458		Rabbani et al.	7/1988	
TS	6✓	4,787,963		MacConnell	11/1998	
	7	4,840,893		Hill et al.	6/1989	
	8	4,849,513		Smith et al.	7/1989	
	9	4,868,103		Stavrianopoulos et al.	9/1989	
	10	4,894,325		Englehardt et al.	1/1990	
	11	4,943,523		Stavrianopoulos	7/1990	
TS	12✓	4,945,045		Forrest et al.	07/1990	
	13	4,952,685		Stavrianopoulos	8/1990	
	14	4,994,373		Stavrianopoulos	2/1991	
	15	5,002,885		Stavrianopoulos	3/1991	
	16	5,013,831		Stavrianopoulos	5/1991	
	17	5,082,830		Brakel et al.	1/1992	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ² (if known)				
	18	EP	0 234 938	A2	Cranfield Inst. of Tech.	2/1987		
	19	EP	0 229 943	B1	Molecular Biosystems Inc.	7/1987		
	20	EP	0 599 337	A2	Canon Kabushiki Kaisha	1/1994		
	21	EP	0 063 879	A2	Yale University	11/1982		
	22	EP	0 515 615		Boehringer Mannheim	9/1996		
	23	CA	2 090 904	A1	F. Hoffman-La Roche	9/1993		
	24	JP	238,166	A	Mitsubishi Corp.	1988	abstract	
	25	JP	6-41183	A2	Mitsubishi Corp.	1994		

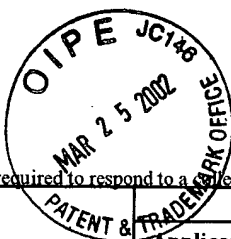
Examiner Signature	<i>Teresa Stnelechia</i>	Date Considered	12/15/02
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		Application Number	09/921,645
		Filing Date	August 03, 2001
		First Named Inventor	Meade et al.
		Group Art Unit	1656 1637
		Examiner Name	Not Yet Assigned. Teresa Strelchuk
Sheet 2 of 12	Attorney Docket Number	A-64411-2/RFT/RMS/RMK	

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		Number	Kind Code ² (if known)			
IS	26	5,089,112		Skotheim et al.	02/1992	
	27	5,175,269		Stavrianopoulos	12/1992	
IS	28	5,180,968		Bruckenstein et al.	01/1993	
	29	5,241,060		Englehardt et al.	8/1993	
	30	5,242,828		bergstrom et al.	09/1993	
	31	5,278,043		Bannwarth et al.	1/1995	
	32	5,312,527		Mikkelsen et al.	5/1994	
	33	5,328,824		Ward et al.	7/1994	
IS	34	5,356,786		Heller et al.	10/1994	
IS	35	5,391,272		O'Daly et al.	02/1995	
	36	5,403,451		Riviello et al.	4/1995	
	37	5,436,161		Bergstrom et al.	07/1995	
IS	38	5,443,701		Willner et al.	08/1995	
	39	5,449,767		Ward et al.	9/1995	
	40	5,472,881		Beebe et al.	12/1995	
	41	5,476,928		Ward et al.	12/1995	
	42	5,552,270		Khrapko et al.	9/1996	

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		Office ³	Number ⁴	Kind Code ² (if known)				
IS	43	WO	86/05815	A1	Genentics International Inc.	03/1985		
	44	WO	90/05732	A1	Columbia Univ.	5/1990		
	45	WO	92/10757	A1	Boehringer Mannheim	6/1992		
	46	WO	93/22678	A2	Mass Inst. of Tech	11/1993		
	47	WO	93/10267	A1	IGEN, Inc.	5/1993		
	48	WO	94/22889	A1	Cis Bio International	10/1994		
	49	WO	95/15971	A2	Calif. Inst. of Technology	6/1995		
	50	WO	96/40712	A1	Calif. Inst. of Technology	12/1996		

Examiner Signature	Teresa Strelchuk	Date Considered	12/15/02
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Application Number	09/921,645
Filing Date	August 03, 2001
First Named Inventor	Meade et al.
Group Art Unit	1656 / 637
Examiner Name	Not Yet Assigned Terence H. Lee
Attorney Docket Number	A-64411-2/RFT/RMS/RMK

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Sheet	3	of	12
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Attorney Docket Number	A-64411-2/RFT/RMS/RMK
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	51	5,565,552		Magda et al.	10/1996	
	52	5,571,568		Ribi et al.	11/1996	
	53	5,573,906		Bannwarth et al.	11/1996	
	54	5,591,578		Meade et al.	1/1997	
	55	5,595,908		Fawcett et al.	1/1997	
	56	5,601,982		Sargent et al.	2/1997	
	57	5,620,850		Bamdad et al.	4/1997	
TS	58	5,632,957		Heller et al.	05/1997	
TS	59	5,700,667		Marble et al.	12/1997	
	60	5,705,348		Meade et al.	1/1998	
	61	5,741,700		Ershov et al.	4/1998	
	62	5,756,050		Ershov et al.	5/1998	
	63	5,770,369		Meade et al.	6/1998	
	64	5,770,721		Ershov et al.	6/1998	
	65	5,776,672		Hashimoto et al.	7/1998	
	66	5,780,234		Meade et al.	7/1998	


[illegible]

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				Application Number	09/921,645
				Filing Date	August 03, 2001
				First Named Inventor	Meade et al.
				Group Art Unit	1656 / 637
				Examiner Name	Not Yet Assigned Teresa Senelec
Sheet	4	of	12	Attorney Docket Number	A-64411-2/RFT/RMS/RMK

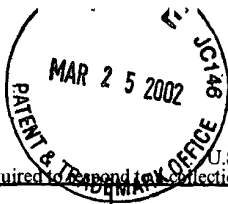
U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code* (if known)			
	73	5,824,473		Meade et al.	10/1998	
TS	74 ✓	5,837,859		Teoule et al.	11/1998	
TS	75 ✓	5,849,486		Heller et al.	12/1998	
	76	5,851,772		Mirzabekov et al.	12/1998	
	77	5,952,172		Meade et al.	9/1999	
	78	6,087,100		Meade et al.	07/2000	
TS	79 ✓	6,096,825		Garnier	08/2000	
TS	80 ✓	6,177,250		Meade et al.	01/2001	
TS	81 ✓	6,180,352		Meade et al.	01/2001	
TS	82 ✓	6,200,761		Meade et al.	03/2001	
TS	83 ✓	6,207,369	B	Wohlstadter et al.	03/1995	
TS	84 ✓	6,238,870		Meade et al.	05/2001	

FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ² (if known)				
—	85	WO	99/67425	A2	Clinical Micro Systems	12/1999	—	
—	86	WO	99/14596	A1	AB Sangtec Medical	3/1999	—	
—	87	WO	99/37819	A2	Clinical Micro Systems	07/1999	—	
—	88	EP	0 589 867	B1	Pharmacia-Biosensor	04/1996	—	
—	89	WO	90/05303	A1	Pharmacia-AB	05/1990	—	
Examiner Signature	Teresa Stuebelia				Date Considered	12/15/02		

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Substitute for form 1449B/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/921,645
		Filing Date	August 03, 2001
		First Named Inventor	Meade et al.
		Group Art Unit	1656/637
		Examiner Name	Not Yet Assigned Teresa Strzelicka
Sheet	5	of	12
		Attorney Docket Number	A-64411-2/RFT/RMS/RMK

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	90	Aizawa et al., "Integrated Molecular Systems for Biosensors," Sensors and Actuators B, B@\$ (Nos 1/3) Part 1:1-5 (March 1995).	
	91	Albers et al., "Design of Novel Molecular Wires for Realizing Long-Distance Electron Transfer," Biochemistry and Bioenergetics, 42:25-33 (1997).	
	92	Alleman, K.S., et al., "Electrochemical Rectification at a Monolayer-Modified Electrode," J. Phys. Chem., 100:17050-17058 (1996).	
	93	Arkin et al. "Evidence for Photoelectron Transfer Through DNA Intercalation," J. Inorganic Biochem. Abstracts, 6th International Conference on Bioinorganic Chemistry, 51(1) & (2):526 (1993).	
	94	Barisei et al., "Conducting Polymer Sensors," TRIP, 4(9):307-311 (1996).	
	95	Baum, R. M., "Views on Biological, Long-Range Electron Transfer Stir Debate," C&EN, pp 20-23 (1993).	
	96	Bechtold, R., et al., "Ruthenium-Modified Horse Heart Cytochrome c: Effect of pH and Ligation on the Rate of Intramolecular Electron Transfer between Ruthenium(II) and Heme(III)," J. Phys. Chem., 90(16):3800-3804 (1986).	
TS	97	Beattie et al., "Genosensor Technology," Clinical Chemistry, 39(4): 719-722 (1993).	
	98	Bidan, "Electroconducting conjugated polymers: new sensitive matrices to build up chemical or electrochemical sensors. A Review," Sensors and Actuators, B6:45-56 (1992).	
	99	Biotechnology and Genetics: Genetic Screening Integrated Circuit," The Economist (February 25-March 3, 1995).	
	100	Blonder et al., "Three-dimensional Redox-Active layered Composites of Au-Au, Ag-Ag and Au-Ag Colloids," Chem. Commun. 1393-1394 (1998).	
	101	Boguslavsky, L. et al., "Applications of redox polymers in biosensors," Solid State Ionics, 60:189-197 (1993).	
TS	102	Bamdad, C. "A DNA self-assembled monolayer for the specific attachment of unmodified double - or single stranded DNA," Biophysical Journal, 75:1997-2003 (1988).	
	103	Bowler, B. E., et al., "Long-Range Electron Transfer in Donor (Spacer) Acceptor Molecules and Proteins," Progress in Inorganic Chemistry: Bioinorganic Chemistry, 38:259-322 (1990).	
	104	Brun, A. M., et al., "Photochemistry of Intercalated Quaternary Diazaaromatic Salts," J. Am. Chem. Soc., 113:8153-8159 (1991).	
	105	Bumm, et al., "Are Single Molecular Wires Conducting?," Science 271:1705-1707 (1996).	
	106	Cantor, C.R. et al., "Report on the Sequencing by Hybridization Workshop," Genomics, 13:1378-1383 (1992).	
	107	Carr et al., "Novel Electrochemical Sensors for Neutral Molecules," Chem. Commun., 1649-1650 (1997).	
	108	Carter et al., "Voltammetric Studies of the Interaction of Metal Chelates with DNA. 2. Tris-Chelated Complexes of Cobalt(III) and Iron(II) with 10-Phenanthroline and 2,2'-Bipyridine," J. Am. Chem. Soc., 111:8901-8911 (1989).	

Examiner Signature	Teresa Strzelicka	Date Considered	12/15/02
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		Filing Date	August 03, 2001		
		First Named Inventor	Meade et al.		
		Group Art Unit	1656 / 637		
		Examiner Name	Not Yet Assigned <i>Terrance</i>		
Sheet	6	of	12	Attorney Docket Number	A-64411-2/RFT/RMS/RMK

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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	109	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocycytochrome c by Ru(2,2'-bpy) ₂ (im)(His-33) ³⁺ ," <i>J. Am. Chem. Soc.</i> , 113:7056-7057 (1991).	
	110	Chidsey, et al., "Coadsorption of Ferrocene-Terminated and Unsubstituted Alkanethiols on Gold" Electroactive Self-Assembled Monolayers," <i>J. Am. Chem. Soc.</i> , 112:4301-4306 (1990).	
	111	Chidsey, C.E.D., et al., "Free Energy and Temperature Dependence of Electron Transfer at the Metal Electrolyte Interface," <i>Science</i> , 251:919-922 (1991).	
	112	Chrissey, et al., "Covalent attachment of synthetic DNA to self-assembled monolayer films," <i>Nucleic Acids Research</i> , 24(15):3031-3039 (1996).	
	113	Clery, "DNA Goes Electric," <i>Science</i> , 267:1270 (1995).	
	114	<i>Commerce Business Daily Issue of September 26, 1996 PSA#1688.</i>	
	115	Davis, L. M., et al., "Electron Donor Properties of the Antitumour Drug Amsacrine as Studied by Fluorescence Quenching of DNA-Bound	
	116	Davis, L. M., et al., "Elements of biosensor construction," <i>Enzyme Microb. Technol.</i> 17:1030-1035 (1995).	
	117	Degani et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 2. Methods for Bonding Electron-Transfer Relays to Glucose Oxidase and D-Amino-Acid Oxidase," <i>J. Am. Chem. Soc.</i> 110:2615-2620 (1988).	
	118	Degani, Y., et al., "Electrical Communication between Redox Centers of Glucose Oxidase and Electrodes via Electrostatically and Covalently Bound Redox Polymers," <i>J. Am. Chem. Soc.</i> , 111:2357-2358 (1989).	
	119	Degani, Y., et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 1. Electron Transfer from Glucose Oxidase to Metal Electrodes via Electron Relays, Bound Covalently to the Enzyme," <i>J. Phys. Chem.</i> , 91(6):1285-1288 (1987).	
	120	Deinhammer, R.S., et al., "Electronchemical Oxidation of Amine-containing compounds: A Route to the Surface Modification of glassy carbon electrodes," <i>Langmuir</i> , 10:1306-1313 (1994).	
	121	Dreyer, G. B., et al., "Sequence-specific cleavage of single-stranded DNA: Oligodeoxynucleotide-EDTA-Fe(II)," <i>Proc. Natl. Acad. Sci. USA</i> , 82:968-972 (1985).	
	122	Drobyshev, A. et al., "Sequence Analysis by Hybridization with Oligonucleotide Microchip: Identification of β -thalassemia Mutations," <i>Gene</i> , 188:45-52 (1997).	
	123	Dubiley, S. et al., "Fractionation, phosphorylation and Ligation on Oligonucleotide Microchips to Enhance Sequencing by Hybridization," <i>Nucleic Acids Research</i> , 25(12):2259-2265 (1997).	
	124	Durham, B., et al., "Electron-Transfer Kinetics of Singly Labeled Ruthenium(II) Polypyridine Cytochrome c Derivatives," <i>Advances in Chemistry Series</i> , 226:181-193 (1990).	

Examiner Signature	<i>Teresa Strelacka</i>	Date Considered	12/15/02
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		Group Art Unit	4656/637
		Examiner Name	Not Yet Assigned Teresa
Sheet 7	of 12	Attorney Docket Number	A-64411-2/RFT/RMS/RMK

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	125	Durham, B., et al., "Photoinduced Electron-Transfer Kinetics of Singly Labeled Ruthenium Bis(bipyridin) Dicarboxybipyridine Cytochrome <i>c</i> Derivatives," <i>Biochemistry</i> , 28:8659-8665 (1989).	
	126	Elghanian et al., "Selective Colorimetric Detection of Polynucleotides Based on the Distance-Dependent Optical Properties of Gold Nanoparticles," <i>Science</i> , 277:1078-1081 (1997).	
	127	Elias, H., et al., "Electron-Transfer Kinetics of Zn-Substituted Cytochrome <i>c</i> and Its Ru(NH ₃) ₅ (Histidine-33) Derivative," <i>J. Am. Chem. Soc.</i> , 110:429-434 (1988).	
	128	Farver, O., et al., "Long-range intramolecular electron transfer in azurins," <i>Proc. Natl. Acad. Sci. USA</i> , 86:6968-6972 (1989).	
	129	Fotin, A. et al., "Parallel Thermodynamic Analysis of Duplexes on Oligodeoxyribonucleotide Microchips," <i>Nucleic Acids Research</i> , 216(6):1515-1521 (1998).	
	130	Fox, M. A., et al., "Light-Harvesting Polymer Systems," <i>C&EN</i> , pages 38-48 (March 15, 1993).	
	131	Fox, L. S., et al., "Gaussian Free-Energy Dependence of Electron-Transfer Rates in Iridium Complexes," <i>Science</i> , 247:1069-1071 (1990).	
	132	Francois, J-C., et al., "Periodic Cleavage of Poly(dA) by Oligothymidylates Covalently Linked to the 1,10-Phenanthroline-Copper Complex," <i>Biochemistry</i> , 27:2272-2276 (1988).	
	133	Friedman, A. E., et al., "Molecular 'Light Switch' for DNA: Ru(bpy) ₃ (dppz) ²⁺ ," <i>J. Am. Chem. Soc.</i> , 112:4960-4962 (1990).	
	134	Fromherz, P., et al., "Photoinduced Electron Transfer in DNA Matrix from Intercalated Ethidium to Condensed Methylviologen," <i>J. Am. Chem. Soc.</i> , 108:5361-5362 (1986).	
	135	Gardner, et al., "Application of conducting polymer technology in microsystems," <i>Sensors and Actuators</i> , A51:57-66 (1995).	
	136	Gregg, B. A., et al., "Redox Polymer Films Containing Enzymes. 1. A Redox-Conducting Epoxy Cement: Synthesis, Characterization, and Electrocatalytic Oxidation of Hydroquinone," <i>J. Phys. Chem.</i> , 95:5970-5975 (1991).	
	137	Gregg, B. A., et al., "Cross-linked redox gels containing glucose oxidase for amperometric biosensor applications," <i>Anal. Chem.</i> , 62:258-263 (1990).	
	138	Guschin, D. et al., "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," <i>Analytical Biochemistry</i> , 250:203-211 (1997).	
	139	Guschin, D. et al., "Oligonucleotide Microchips as Genosensors for Determinative and Environmental Studies in Microbiology," 63(6):2397-2402 (1997).	
	140	Hashimoto, et al., "Sequence-Specific Gene Detection with a Gold Electrode Modified with DNA Probes and an Electrochemically Active Dye," <i>Anal. Chem.</i> 66:3830-3833 (1994).	
	141	Hegner, et al., "Immobilizing DNA on gold via thiol modification for atomic force microscopy imaging in buffer solutions," <i>FEBS</i> 336(3):452-456 (1993).	

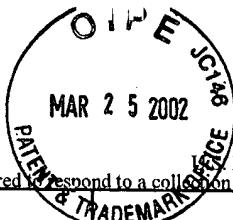
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		Filing Date	August 03, 2001
		First Named Inventor	Meade et al.
		Group Art Unit	1656-1637
		Examiner Name	Not Yet Assigned <i>Tetra Stueck</i>
		Attorney Docket Number	A-64411-2/RFT/RMS/RMK
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<input checked="" type="checkbox"/>	147	Hobbs et al., "Polynucleotides Containing 2'-Amino-2'-deoxyribose and 2'-Azido-2'-deoxyribose," <i>Biochemistry</i> , 12(25):5138-5145 (1973).	
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<input checked="" type="checkbox"/>	150	Jenkins et al., "A Sequence-Specific Molecular Light Switch: Tebhering of an Oligonucleotide to a Dipyrrophenazine Complex of Ruthenium (II), <i>J. Am. Chem. Soc.</i> , 114:8736-8738 (1992).	
<input checked="" type="checkbox"/>	151	Johnston et al., "Trans-Dioxorhenium(V)-Mediated Electrocatalytic Oxidation of DNA at Indium Tin-Oxide Electrodes: Voltammetric Detection of DNA Cleavage in Solution," <i>Inorg. Chem.</i> , 33:6388-6390 (1994).	
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<input checked="" type="checkbox"/>	153	Katritzky, et al., "Pyridylethylation - A New Protection Method for Active Hydrogen Compounds," <i>Tetrahedron Letters</i> , 25(12):1223-1226 (1984).	
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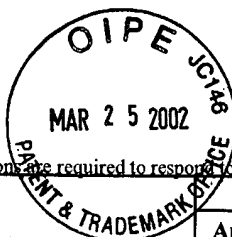
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Filing Date	August 03, 2001
First Named Inventor	Meade et al.
Group Art Unit	4656-637
Examiner Name	Not Yet Assigned Teresa Stnelechia
Attorney Docket Number	A-64411-2/RFT/RMS/RMK

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	160	Lenhard, J.R., et al., "Part VII Covalent Bonding of a Reversible- Electrode Reactant to Pt Electrodes Using an organosilane Reagent" <i>J. Electroanal. Chem.</i> , 78:195-201 (1977).	
	161	Lincoln et al., "Shorting Circuiting the Molecular Wire," <i>J. Am. Chem. Soc.</i> , 119(6):1454-1455 (1997).	
	162	Lipkin "Identifying DNA by the Speed of Electrons," <i>Science News</i> , 147(8):117 (1995).	
	163	Livshits, M. et al., "Theoretical Analysis of the Kinetics of DNA Hybridization with Gel-Immobilized Oligonucleotides," <i>Biophysical Journal</i> , 71:2795-2801 (1996).	
	164	Maskos, et al., "Oligonucleotide hybridisations on glass supports: a novel linker for oligonucleotide synthesis and hybridisation properties of oligonucleotides synthesised <i>in situ</i> ," <i>Nucleic Acids Research</i> , 20(7):1679-1684 (1992).	
	165	McGee, et al., "2'-Amino-2' deoxyuridine via an Intramolecular Cyclization of a Trichloroacetimidate," <i>J. Org. Chem.</i> , 61:781-785 (1996).	
	166	Meade, T. J., et al., "Electron Transfer through DNA: Site-Specific Modification of Duplex DNA with Ruthenium Donors and Acceptors," <i>Angew Chem. Int. Ed. Engl.</i> , 34:352-354 (1995).	
	167	Meade, T. J., "Driving Force Effects on the Rate of Long-Range Electron Transfer in Ruthenium-Modified Cytochrome c," <i>J. Am. Chem. Soc.</i> , 111:4353-4356 (1989).	
	168	Mestel, "'Electron Highway' Points to Identity of DNA," <i>New Scientist</i> , p. 21 (1995).	
	169	Millan, K.M. and Mikkelsen, S.R., "Sequence-Selective Biosensor for DNA Based on Electroactive Hybridization Indicators," <i>Anal. Chem.</i> , 65:2317-2323 (1993).	
	170	Millan, K.M., et al., "Covalent Immobilization of DNA onto Glassy Carbon Electrodes," <i>Electroanalysis</i> , 4(10):929-932 (1992).	
	171	Millan, et al., "Voltammetric DNA Biosensor for Cystic Fibrosis Based on a Modified Carbon Paste Electrode," <i>Anal. Chem.</i> , 66:2943-2948 (1994).	
	172	Miller, C., "Absorbed ω -Hydroxy Thiol Monolayers on Gold Electrodes: Evidence for Electron Tunneling to Redox Species in Solution," <i>J. Phys. Chem.</i> , 95:877-886 (1991).	
	173	Mirkin et al., "A DNA-based Method for Rationally Assembling Nonoparticles into Macroscopic Materials," <i>Nature</i> , 382:607-609 (1996).	
	174	Mirzabekov, A. et al., "Dna Sequencing by Hybridization - a Megasequencing Method and a Diagnostic Tool," <i>Tibtech</i> , 12:27-32 (1994).	
	175	Mitchell et al., "Programmed Assembly of DNA Functionalized Quantum Dots," <i>J. Am. Chem. Soc.</i> , 121:8122-8123 (1999).	

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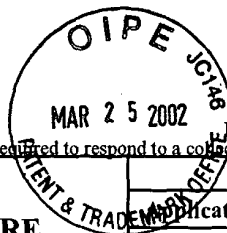
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				First Named Inventor	Meade et al.
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	178	Mucic et al., "DNA-Directed Synthesis of Binary Nanoparticle Network Materials," <i>J. Am. Chem. Soc.</i> , 120:12674-12675 (1998).	
	179	Mucic et al., "Synthesis and Characterization of DNA with Ferrocenyl Groups Attached to their 5'-Termini: Electrochemical Characterization of a Redox-Active Nucleotide Monolayer," <i>Chem. Commun.</i> , pp. 555-557 (1996).	
	180	Murphy, C. J., et al., "Long-Range Photoinduced Electron Transfer Through a DNA Helix," <i>Science</i> , 262:1025-1029 (1993).	
	181	Orellana, G., et al., "Photoinduced Electron Transfer Quenching of Excited Ru(II) Polypyridyls Bound to DNA: The Role of the Nucleic Acid Double Helix," <i>Photochemistry and Photobiology</i> , 54(4):499-509 (1991).	
	182	Palecek, "From Polarography of DNA to Microanalysis with Nucleic Acid-Modified Electrodes," <i>Electroanalysis</i> , 8(1):7-14 (1996).	
	183	Parinov, S., "DNA Sequencing by Hybridization to Microchip octa- and Decanucleotides Extended by Stacked Pentanucleotides," <i>Nucleic Acids Research</i> , 24(15):2998-3004 (1996).	
	184	Paterson, "Electric Genes: Current Flow in DNA Could Lead to Faster Genetic Testing," <i>Scientific American</i> , 33 (May 1995).	
	185	Proudnikov, D., "Immobilization of DNA in Polyacrylamide Gel for the manufacture of DNA and DNA-Oligonucleotide Microchips," <i>Analytical Biochemistry</i> , 259:34-41 (1998).	
	186	Proudnikov, D. et al., "Chemical Methods of DNA and RNA Fluorescent Labeling," <i>Nucleic Acids Research</i> , 24(22):4535-4542 (1996).	
	187	Purugganan, M. D., et al., "Accelerated Electron Transfer Between Metal Complexes Mediated by DNA," <i>Science</i> , 241:1645-1649 (1988).	
	188	Reimers et al., "Toward Efficient Molecular Wires and Switches: the Brooker Ions," <i>Biosystems</i> , 35:107-111 (1995).	
	189	Rhodes, D. And A. Khug, "Helical Periodicity of DNA Determined by Enzyme Digestion," <i>Nature</i> , 286:573-578 (1980).	
	190	Risser, S. M., et al., "Electron Transfer in DNA: Predictions of Exponential Growth and Decay of Coupling with Donor-Acceptor Distance," <i>J. Am. Chem. Soc.</i> , 115(6):2508-2510 (1993).	
	191	Sato, Y., et al., "Unidirectional Electron Transfer at Self-Assembled Monolayers of 11-Ferrocenyl-1-undecanethiol on Gold," <i>Bull. Chem. Soc. Jpn.</i> , 66(4):1032-1037 (1993).	
	192	Satyanarayana, S., et al., "Neither Δ- nor Λ-Tris(phenanthroline)ruthenium(II) Binds to DNA by Classical Intercalation," <i>Biochemistry</i> , 31(39):9319-9324 (1992).	
	193	Schreiber, et al., "Bis(purine) Complexes of trans-aPt ^{II} : Preparation and X-ray Structures of Bis(9-methyladenine) and Mixed 9-Methyladenine, 9-Methylguanine Complexes and Chemistry Relevant to Metal-Modified Nucleobase Triples and Quartets," <i>J. Am. Chem. Soc.</i> 118:4124-4132 (1996).	
	194	Schuhmann, W., et al., "Electron Transfer between Glucose Oxidase and Electrodes via Redox Mediators Bound with Flexible Chains to the Enzyme Surface," <i>J. Am. Chem. Soc.</i> , 113:1394-1397 (1991).	

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	195	Schumm, et al., "Iterative Divergent/Convergent Approach to Linear Conjugated Oligomers by Successive Doubling of the Molecular Length: A Rapid Route to a 128 Å-Long Potential Molecular Wire," <i>Angew. Chem. Int. Ed. Engl.</i> , 33(11):1360-1363 (1994).	
	196	Sigal et al., "A Self-Assembled Monolayer for the Binding and Study of Histidine-Tagged Proteins by Surface Plasmon Resonance," <i>Anal. Chem.</i> , 68(3):490-497 (1996).	
	197	Sloop et al., "Metalloorganic labels for DNA sequencing and mapping," <i>New. J. Chem.</i> , 18: 317-326 (1994).	
	198	Southern, et al., "Arrays of complementary oligonucleotides for analysing the hybridisation behaviour of nucleic acids," <i>Nucleic Acids Research</i> , 22(8):1368-1373 (1994).	
	199	Storhoff et al., "One-Pot Colorimetric Differentiation of Polynucleotides with Single-Base Imperfections Using Gold Nanoparticles Probes," <i>J. Am. Chem. Soc.</i> , 120:1959-1964 (1998).	
	200	Strobel, S. A., et al., "Site-Specific Cleavage of a Yeast Chromosome by Oligonucleotide-Directed Triple-Helix Formation," <i>Science</i> , 249:73-75 (1990).	
	201	Su, et al., "Interfacial Nucleic Acid Hybridization Studied by Random-Primer ³² P Labelling and Liquid-Phase Acoustic Network Analysis," <i>Analytical Chemistry</i> , 66(6):769-777 (1994).	
	202	Telser, J., et al., "DNA Oligomers and Duplexes Containing a Covalently Attached Derivative of Tris(2,2'-bipyridine)ruthenium(II): Synthesis and Characterization by Thermodynamic and Optical Spectroscopic Measurements," <i>J. Am. Chem. Soc.</i> , 111:7221-7226 (1989).	
	203	Telser, J., et al., "DNA Duplexes Covalently Labeled at Two Sites: Synthesis and Characterization by Steady-State and Time-Resolved Optical Spectroscopies," <i>J. Am. Chem. Soc.</i> , 111:7226-7232 (1989).	
	204	Timofeev, E. et al., "Regioselective Immobilization of Short Oligonucleotides to Acrylic Copolymer Gel," <i>Nucleic Acids Research</i> , 24(16): 3142-3148 (1996).	
	204	Timofeev, E. et al., "Methidium Intercalator Inserted into Synthetic Oligonucleotides," <i>Tetrahedron Letters</i> , 37(47):8467-8470 (1996).	
	206	Tour, "Conjugated Macromolecules of Precise Length and Constitution. Organic Synthesis for the Construction of Nanoarchitectures," <i>Chem. Rev.</i> , 96:537-553 (1996).	
	207	Tour, et al., "Self-Assembled Monolayers and Multilayers of Conjugated Thiols, α-ω-Dithiols, and Thioacetyl-Containing Adsorbates. Understanding Attachments between Potential Molecular Wires and Gold Surfaces," <i>J. Am. Chem. Soc.</i> , 117:9529-9534 (1995).	
	208	Tullius, T.D. and B.A. Dombroski, "Iron(II) EDTA Used to Measure the Helical Twist Along Any DNA Molecule," <i>Science</i> , 230:679-681 (1985).	
	209	Turro, N. J., et al., "Molecular Recognition and Chemistry in Restricted Reaction Spaces. Photophysics and Photoinduced Electron Transfer on the Surfaces of Micelles, Dendrimers, and DNA," <i>Acc. Chem. Res.</i> , 24:332-340 (1991).	

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+	210	Turro, N., et al. "Photoelectron Transfer Between Molecules Adsorbed in Restricted Spaces." <i>Photochem. Convers. Storage Sol. Energy, Proc. Int. Conf., 8th</i> , pp 121-139 (1990).	
	211	Uosake, K., et al., "A Self-Assembled Monolayer of Ferrocenylalkane Thiols on Gold as an Electron Mediator for the Reduction of Fe(III)-EDTA in Solution," <i>Electrochimica Acta.</i> , 36(11/12):1799-1801 (1991).	
	212	Van Ness, J., et al., "A Versatile Solid Support System for Oligodeoxynucleotide Probe-Based-Hybridization Assays," <i>Nucleic Acids Research</i> , 19(12):3345-3350 (1991).	
	213	Velev et al., "In Situ Assembly of Colloidal Particles into Miniaturized Biosensors," <i>The ACS Journal of Surfaces and Colloids, Langmuir</i> , 15(11):3693-3698 (1999).	
	214	Watson et al., "Hybrid Nanoparticles with Block Copolymer Shell Structures," <i>J. Am. Chem. Soc.</i> , 121:462-463 (1999).	
	215	Weber, et al., "Voltammetry of Redox-Active Groups Irreversibly Adsorbed onto Electrodes. Treatment Using the Marcus Relation between Rate and Overpotential," <i>Anal. Chem.</i> , 66:3164-3172 (1994).	
	216	Williams, et al., "Studies of oligonucleotide interactions by hybridisation to arrays: the influence of dangling ends on duplex yield," <i>Nucleic Acids Research</i> , 22(8):1365-1367 (1994).	
	217	Winkler, J. R., et al., "Electron Transfer in Ruthenium-Modified Proteins," <i>Chem. Rev.</i> , 92:369-379 (1992).	
	218	Xu, et al., "Immobilization and Hybridization of DNA on an Aluminum(III) Alkanebisphosphonate Thin Film with Electrogenenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 117:2627-2631 (1995).	
	219	Xu, et al., "Immobilization of DNA on an Aluminum(III) alkanebisphosphonate Thin Film with Electrogenenerated Chemiluminescent Detection," <i>J. Am. Chem. Soc.</i> , 116:8386-8387 (1994).	
	220	Yang, et al., "Growth and Characterization of Metal(II) Alkanebisphosphonate-Multilayer-Thin Films on Gold Surfaces," <i>J. Am. Chem. Soc.</i> , 115:11855-11862 (1993).	
	221	Yershov, G. et al., "DNA Analysis and Diagnostics on Oligonucleotide Microchips," <i>Proc. Natl. Acad. Sci. USA</i> , 93:4913-4918 (1996).	
	222	Zhou, et al., "Fluorescent Chemosensors Based on Energy Migration in Conjugated Polymers: The Molecular Wire Approach to Increased Sensitivity," <i>J. Am. Chem. Soc.</i> , 117:12593-12602 (1995).	
	223	Bain et al., "Formation of Monolayers by the Coadsorption of Thiols on Gold: Variation in the Length of the Alkyl Chain," <i>J. Am. Chem. Soc.</i> , 111:7164-7175 (1989).	
	224	Zimmermann et al., "DNA stretching on functionalized gold surfaces." <i>Nucleic Acids Res.</i> 1994 Feb 11;22(3):492-7.	

Examiner Signature	Teresa Stuebelia	Date Considered	12/15/02
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